

REMARKS/ARGUMENTS

In paragraph numbered 2 of the Office action, the Examiner objects to the specification as failing to provide antecedent basis for the subject matter of claim 22. Claim 22 is reproduced as follows with the elements of the claims denoted by reference numerals found in the present specification.

22. A damper (1) for an automobile seat (331) mounted on a automobile chassis (337) so as to be rotatably about a shaft (334) with an engaging tip portion (335), comprising:

a housing (304) having a housing body (303), one of an arm portion (302) and a collar portion (351) united to said housing body (303), said housing body (303) including a hollow cylindrical member (312) to which said one of the arm portion (302) and the collar portion (351) is united, a closure portion (314) which closes one end face of said hollow cylindrical member (312), and an arcuate projection (315) projecting axially from an inner surface of the closure portion (314) to define a central recessed portion (313) said one of the arm portion (302) and the collar portion (351) being adapted to be fixed to one of said automobile seat (331) and said automobile chassis (337);

a gap forming member (307) accommodated rotatably in said hollow cylindrical member (312) of said housing body (303) for forming a gap (306) in association with an inner surface of said housing body (303), said gap forming member including a central projection (321) fitted in said central recessed portion (313) so as to be rotatable relative to said arcuate projection (315), a hollow cylindrical projection (322) axially extending to form said gap (306) in cooperation with said arcuate projection (315), and a hole portion (324) into which said engaging tip portion (335) of said shaft (334) is inserted to engage with said gap forming member (307), whereby said gap

forming member (307) is rotated relative to said housing body (303) by rotation of said shaft (334) relative to said one of said automobile seat (331) and said chassis (337); and silicone-based unvulcanized rubber (4) disposed in said gap (306), said silicone-based unvulcanized rubber (4) being in contact with each surface of said arcuate projection (315), said hollow cylindrical projection (322) and said hollow cylindrical member (312), said silicone-based unvulcanized rubber (4) being plastically-deformed when said gap forming member (307) is rotated relative to said housing body (303) and having a degree of plasticity of not less than 30 and not more than (420).

The rejection based on 35 U.S.C. §112 is believed cured since the phraseology "without being bonded thereto" has been removed from the independent claims. The rejection of the claims as anticipated by German publication '542 and the rejection of the claims as obvious within the meaning of 35 U.S.C. 103 based on Japanese publication 2,605,841 in view of German publication 27 22 542 and Knotts are respectfully traversed. The damper defined by each of independent claims 20, 21 and 22 comprises silicone-based unvulcanized rubber having a degree of plasticity of not less than 30 and not more than 420. If the degree of plasticity is smaller than 30, the silicone-based unvulcanized rubber is liable to flow, and the silicone-based unvulcanized rubber disposed between the pair of members requires sufficient sealing for preventing its leakage, and it becomes difficult to expect a large damping force. If the degree of plasticity is greater than 420, the affinity of the silicone-based unvulcanized rubber with contact surfaces of the pair of members is practically lost, and the pair of members slip with respect to the silicone-based unvulcanized rubber in the relative movement of the pair of members with respect to each other, thereby making it difficult to obtain a substantial damping force based on the deformation of the silicone-based unvulcanized rubber. In addition even if the surfaces of the

pair of members in contact with such silicone-based unvulcanized rubber are formed as uneven surfaces for preventing the slippage, and the silicone-based unvulcanized rubber is gripped, since the silicone-based unvulcanized rubber having a degree of plasticity greater than 420 is extremely brittle, the silicone-based unvulcanized rubber is easily sheared (torn apart) in the relative movement of the pair of members with respect to each other. This also makes it difficult to obtain the substantial damping force based on the deformation of the silicone-based unvulcanized rubber.

Further, the silicone-based unvulcanized rubber is normally filled in the gap between the pair of members. If its degree of plasticity is greater than 420, it becomes extremely difficult to fill the silicone-based unvulcanized rubber between the pair of members without a gap. If a gap is produced between each of the pair of members and the silicone-based unvulcanized rubber after the filling of the silicone-based unvulcanized rubber, there is a possibility that a desired damping force cannot be obtained (refer to pages 4 to 6 of the specification).

Therefore, the presently claimed invention is capable of providing a damper which eliminates the possibility of wear, makes it possible to eliminate a seal for preventing leakage to easily obtain a large damping force even if the damper is lightweight and compact.

Neither German publication '542, Knotts nor Japanese publication '841 disclose the damper having the silicone-based unvulcanized rubber with the above specific degree of plasticity.

The Examiner states that Knotts shows a non-bonded damping medium at 220, and that the performance of the damper can be controlled by varying the physical properties of the damping medium 220. However, the damping medium 220 disclosed in Knotts is the segment of "solid" material, but it is not silicone-based unvulcanized rubber capable of plastically

deforming. Accordingly, the invention defined by the amended claims 20, 21 or 22 is not anticipated by Japanese publication '841, German publication '542 or Knotts, nor obvious from Japanese publication '841 in view of German publication '542 and Knotts.

Entry of the amendment is respectfully requested on the grounds that it cures the objection to the specification as well as the rejection based on 35 U.S.C. §112 thereby rendering the claims in better form for appeal. While the amendments to claims 20-22 touch the merits of the application, it is quite clear that they afford a substantial basis for patentability when taken together with the other elements and functions set forth in the claims.

Accordingly, reconsideration and allowance of the pending application is respectfully requested.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: Richard G. Besha
Richard G. Besha
Reg. No. 22,770

RGB:pfc
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100